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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. This communication is in response to the correspondence sent on 6/18/2009.

The remarks have been considered below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1 – 7, 9 – 15 and 17 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (2001/0020230) in view of Ham (7,370,005).**

As per claims 1 and 9, Kaneko discloses, a computer-implemented method of matching customer demand with a manufacturer supply of products from plurality of factory facilities ([0085] the embodiment can easily be applied to a form in which a plurality of locations are connected, if in each one of the connected steps, a scheme planning process described below is sequentially repeated), comprising using a computer to perform the steps of:

inputting demand data for a demand of at least one product requested by at least one customer ([0010] The demand-supply steps include production or sales steps that receive an order for purchase, which is construed as demand data) and supply data corresponding to a production capacity of the factory facilities ([0010] and supply a

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product or parts, and further include service provision steps that receive an order for, place an order for, purchase and supply services);

performing a first matching operation to match the demand data with the supply data to obtain a first demand-supply matching result ([0062] After the sales schemes are inputted, the CPU 42 executes a process of calculating a total of orders for each product placed from each of the sales steps 102, 104 to the product-producing steps 112, 114 (amount of order placed), separately for each sale step (step S104). The amount of order placed by each sales step is determined by subtracting a deviation between the input stock record and the sales scheme for the sales step from the stock target value data stored for the sale step in the hard disk 64 functioning as the data storage portion 22. [amount of order placement=stock target value-(stock record-sales scheme)]. The calculation is construed as matching the data);

collecting rematched demand data corresponding to a portion of the demand unsatisfied by the first matching operation from the demand data and collecting rematched supply data corresponding to a portion of the production capacity unused in the first matching operation from the supply data ([0066]If the result of determination is negative, that is, if any one of the initially distributed amounts of orders placed is not within the corresponding order receivable range of the product-producing step, the CPU 42 executes a process of adjusting the distribution of the initially distributed amounts of order placement (step S112));

However, Kaneko does not explicitly disclose, classifying the rematched demand data into a plurality of classified demand data records according to at least one attribute

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of the at least one product and the at least one customer corresponding thereto, the classified demand data having different priorities; and performing a second matching operation to match the classified demand data with the rematched supply data based on the priorities of the classified demand data to obtain a second demand-supply matching result.

Ham teaches inventory replication based upon order fulfillment rates with the features of classifying the rematched demand data into a plurality of classified demand data records according to at least one attribute of the at least one product and the at least one customer corresponding thereto, the classified demand data having different priorities (abstract discusses classifying demand data into three groups); and

performing a second matching operation to match the classified demand data with the rematched supply data based on the priorities of the classified demand data to obtain a second demand-supply matching result (col. 9, lines 15 - 25 discusses performing a matching operation based on the classified groups).

From this teaching of Ham, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and method of Kaneko to include the classifying and matching taught by Ham in order to adequately fulfill an order.

As per claim 2, 10, 18 and 27, Kaneko discloses, wherein the first matching operation step further comprises the steps of:

recording the first demand-supply matching result; and updating the demand data and the supply data according to the first demand-supply matching result ([0031] As shown in FIG. 1, the demand-supply scheme planning apparatus 20 has, as function blocks, a data storage portion 22 for storing various kinds of data regarding each step, which is construed as recording, a data input portion 24 for inputting a value of stock record in each step, sales schemes in sales steps, etc., an index calculating portion 26 for calculating a profitability index, which is construed as updating).

As per claim 3, 11, 19 and 28, Kaneko discloses, wherein the second matching operation step further comprises the steps of:

recording the second demand-supply matching result; and updating the demand data and the supply data according to the second demand-supply matching result ([0031] As shown in FIG. 1, the demand-supply scheme planning apparatus 20 has, as function blocks, a data storage portion 22 for storing various kinds of data regarding each step, which is construed as recording, a data input portion 24 for inputting a value of stock record in each step, sales schemes in sales steps, etc., an index calculating portion 26 for calculating a profitability index, which is construed as updating).

As per claim 4, 12, 20 and 29, Kaneko discloses, wherein the demand data is defined by creating a demand table, the demand table characterizing the relationship between customer demand, the factory facilities, and manufacturing processes for the product as provided thereby ([0039] The operation of the demand-supply scheme

planning apparatus 20 will next be described. FIG. 3 is a construction diagram showing an example of a supply chain as a specific example in which a demand-supply scheme is planned by the demand-supply scheme planning apparatus 20).

As per claim 5, 13, 21 and 30, Kaneko discloses, wherein the supply data is defined by creating a supply table, the supply table characterizing the relationship between the factory facilities, the capacity and manufacturing processes provided by the factory facilities ([0039] As shown in FIG. 3, the supply chain includes two sales step 102, 104 as dealers that sell products A, B, C, D, product-producing steps 112, 114 as product-producing factories each of which produces some of the products A, B, C, D, and supplies produced products to the two sales steps 102, 104, parts-producing steps 122, 124 as parts-producing factories each of which produces some of parts a1, b1, c1, d1 for producing the products A, B, C, D and supplies).

As per claim 6, 14, 22 and 31, Kaneko discloses, wherein the rematched demand data is defined by creating a rematched demand table that characterizes the relationship between unsatisfied demand, the factory facilities, and manufacturing processes for the product as provided thereby ([0085] FIG. 14 is a block diagram illustrating a production scheme planning system according to the embodiment. FIG. 14 illustrates only a step concerned and its preceding and succeeding steps for the sake of convenience, where only one pre-step and only one post-step are shown. However, the embodiment can easily be applied to a form in which a plurality of locations are

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connected, if in each one of the connected steps, a scheme planning process described below is sequentially repeated, or a process of collecting or distributing information exchanged with the pre-step and the post-step is executed).

As per claim 7, 15, 23 and 32, Kaneko discloses, wherein the rematched supply data is defined by creating a plurality of rematched supply tables, the rematched supply tables characterizing the available factory facilities of the manufacturing processes, the manufacturer preferred factory facilities under cost consideration, and the customer preferred factory facilities ([0085] FIG. 14 is a block diagram illustrating a production scheme planning system according to the embodiment. FIG. 14 illustrates only a step concerned and its preceding and succeeding steps for the sake of convenience, where only one pre-step and only one post-step are shown. However, the embodiment can easily be applied to a form in which a plurality of locations are connected, if in each one of the connected steps, a scheme planning process described below is sequentially repeated, or a process of collecting or distributing information exchanged with the pre-step and the post-step is executed).

As per claim 17, Kaneko discloses, a system for matching customer demand with a manufacturer supply of a product from a plurality of factory facilities ([0085] the embodiment can easily be applied to a form in which a plurality of locations are connected, if in each one of the connected steps, a scheme planning process described below is sequentially repeated), comprising:

a match database ([0100] The order placement scheme processing portion 1033 plans an order placement scheme based on the production scheme planned by the production scheme processing portion 1032, by referring to a database of components), storing demand data for a demand of at least one product requested by at least one customer and supply data corresponding to a production capacity of the factory facilities ([0031] As shown in FIG. 1, the demand-supply scheme planning apparatus 20 has, as function blocks, a data storage portion 22 for storing various kinds of data regarding each step);

a rematch database ([0100] The order placement scheme processing portion 1033 plans an order placement scheme based on the production scheme planned by the production scheme processing portion 1032, by referring to a database of components), storing rematched demand data and rematched supply data ([0031] As shown in FIG. 1, the demand-supply scheme planning apparatus 20 has, as function blocks, a data storage portion 22 for storing various kinds of data regarding each step);

a customer interface, enabling input of the demand data ([0030] a keyboard interface 56 connected to a keyboard 58 and a mouse 60, an input/output interface 62 connected to a hard disk 64 and a floppy disk 66, etc.);

a factory interface, enabling input of the supply data ([0030] a keyboard interface 56 connected to a keyboard 58 and a mouse 60, an input/output interface 62 connected to a hard disk 64 and a floppy disk 66, etc); and

a controller computer, coupled to the match database, the rematch database, the customer interface, and the factory interface ([0030] As shown in FIG. 2, the demand-

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supply scheme planning apparatus 20 has a hardware construction formed as a general-purpose computer that is formed by a CPU 42 that is a central processing unit, as a central component. A bus 44 connected to the CPU 42 is connected to a cache memory 46, a cache controller 48, a main memory 50, a graphics controller 52 connected to a CRT 54),

performing a first matching operation to match the demand data with the supply data to obtain a first demand-supply matching result ([0066] Subsequently, the CPU 42 selects from the adjustments 1-3 an adjustment that achieves the greatest profitability index (step S212), and then ends the routine),

collecting rematched demand data corresponding to a portion of the demand unsatisfied in the first matching operation from the demand data and collecting rematched supply data corresponding to a portion of the production capacity unused in the first matching operation from the supply data ([0066] If the result of determination is negative, that is, if any one of the initially distributed amounts of orders placed is not within the corresponding order receivable range of the product-producing step, the CPU 42 executes a process of adjusting the distribution of the initially distributed amounts of order placement (step S112)),

classifying the rematched demand data into a plurality of classified demand data records according to attributes of the at least one product and the at least one customer ([0066] This process is executed by a distribution adjusting process routine exemplified in FIG. 7. When the distribution adjusting process routine is executed, the CPU 42 calculates adjustments 1, 2, 3, and calculates profitability indexes obtained by the

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adjustments 1-3 (step S200-S210)), the classified demand data having different priorities ([0097] The main location designation rule is a rule in which the post-steps are assigned with priorities as restricting conditions, and orders from the post-steps are processed in the order of descending priorities of the post-steps to supply vehicles or the like to the post-steps), and

performing a second matching operation to match the classified demand data with the rematched supply data based on the priorities of the classified demand data to obtain a second demand-supply matching result ([0066] Subsequently, the CPU 42 selects from the adjustments 1-3 an adjustment that achieves the greatest profitability index (step S212), and then ends the routine) ([0097] The main location designation rule is a rule in which the post-steps are assigned with priorities as restricting conditions, and orders from the post-steps are processed in the order of descending priorities of the post-steps to supply vehicles or the like to the post-steps).

4. Claims 8, 16, 24, 25 – 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (2001/0020230) and Ham (7,370,005), further in view of Menninger (6,954,736).

As per claims 8, 16, 24 and 33, Kaneko and Ham disclose the claimed invention but fails to explicitly disclose, wherein the attributes of the corresponding products and customers are new customers and manufacturing processes of the product, existing

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customers and new manufacturing processes of the product, and existing customers and manufacturing processes of the product.

Menninger teaches a system, method and computer program product for order confirmation in a supply chain management framework, with the feature of wherein the attributes of the corresponding products and customers are new customers and manufacturing processes of the product, existing customers and new manufacturing processes of the product, and existing customers and manufacturing processes of the product (col. 16, lines 20 - 26; The advantages of being able to share and update a common data base at the convenience of all users provides enhanced coordination between all participants, which is construed as new and existing customers, improved planning, less over-ordering and product waste, and less time spent managing and coordinating local promotions. For new contracted distributors, daily distributor, which is construed as new and existing manufacturers, invoice feeds can be established.)

From this teaching of Menninger, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the demand-production scheme planning apparatus and storage medium of Kaneko to include the corresponding attributes of taught Menninger in order to evaluate and select new systems.

As per claim 25, Kaneko and Ham disclose, an allocation planning module to receive demand data for a demand of at least one product requested by at least one customer ([0010] The demand-supply steps include production or sales steps that

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receive an order for purchase, which is construed as demand data) and supply data corresponding to production capacity of the factory facilities ([0010] and supply a product or parts, and further include service provision steps that receive an order for, place an order for, purchase and supply services);

However, Kaneko fails to disclose a system of demand and capacity management comprising:

a capacity model having route information for the product, wherein the route information records a plurality of tools; and a capacity management module to reserve capacity according to the demand data and the route information.

Menninger teaches a system, method and computer program product for order confirmation in a supply chain management framework, with the feature of a system of demand and capacity management (col. 17, lines 34 – 38; further benefits include reduction in obsolete inventory cost, reduction in lost sales due to shortages, improved promotional decision making, reduction in supply chain cost through improved inventory and capacity management), comprising:

a capacity model having route information for the product, wherein the route information records a plurality of tools (col. 17, lines 50 – 53; leading to predictive supply chain decisions, which is construed as route information for the product, for the benefit of manufactures, suppliers, distributors and operators is a major benefit provided by the present invention) (col. 17, lines 58 – 60; a first set of data collected from a plurality of stores of the supply chain utilizing a network); and

a capacity management module to reserve capacity according to the demand data and the route information (col. 129, lines 29 – 31; product supply parameters corresponding to each supply chain participant are then determined based on information including the data in operation 11004) (col. 17, lines 60 – 67; the first set of data relates to an amount of goods sold by the stores. A second set of real-time data is collected from the stores utilizing the network in operation 1134. The second set of real-time data relates to the amount of goods sold by the stores. The second set of real-time data is compared against the forecasting in operation 1136 and the results of the comparison are fed back for facilitating supply chain management in operation 1138).

From this teaching of Menninger, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the demand-production scheme planning apparatus and storage medium of Kaneko to include the system of demand and capacity management of taught Menninger in order to improve the invoice system and revenue.

As per claim 26, Kaneko and Ham disclose, wherein the allocation planning module further comprises:

a data input module, inputting the demand data the supply data (0010] The demand-supply steps include production or sales steps that receive an order for purchase, which is construed as demand data);

a first match module, performing a first matching operation to match the demand data with the supply data to obtain a first demand-supply matching result ([0062] After

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the sales schemes are inputted, the CPU 42 executes a process of calculating a total of orders for each product placed from each of the sales steps 102, 104 to the product-producing steps 112, 114 (amount of order placed), separately for each sale step (step S104). The amount of order placed by each sales step is determined by subtracting a deviation between the input stock record and the sales scheme for the sales step from the stock target value data stored for the sale step in the hard disk 64 functioning as the data storage portion 22. [amount of order placement=stock target value-(stock record-sales scheme)]. The calculation is construed as matching the data);

a rematch data collection module, collecting rematched demand data corresponding to a portion of the demand unsatisfied in the first matching operation from the demand data and collecting rematched supply data corresponding to a portion of the unused capacity in the first matching operation from the supply data ([0066]If the result of determination is negative, that is, if any one of the initially distributed amounts of orders placed is not within the corresponding order receivable range of the product-producing step, the CPU 42 executes a process of adjusting the distribution of the initially distributed amounts of order placement (step S112));

a classification module, classifying the rematched demand data into a plurality of classified demand data records according to attributes of the corresponding products and customers, the classified demand data having different priorities (Ham abstract discusses classifying demand data into three groups); and

a second match module, performing a second matching operation to match the classified demand data with the rematched supply data based on the priorities of the

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classified demand data to obtain a second demand-supply matching result (Ham col. 9, lines 15 - 25 discusses performing a matching operation based on the classified groups).

As per claim 27, Kaneko and Ham disclose, wherein the first matching operation step further comprises the steps of:

recording the first demand-supply matching result; and updating the demand data and the supply data according to the first demand-supply matching result ([0031] As shown in FIG. 1, the demand-supply scheme planning apparatus 20 has, as function blocks, a data storage portion 22 for storing various kinds of data regarding each step, which is construed as recording, a data input portion 24 for inputting a value of stock record in each step, sales schemes in sales steps, etc., an index calculating portion 26 for calculating a profitability index, which is construed as updating).

As per claim 28, Kaneko and Ham disclose, wherein the second matching operation step further comprises the steps of:

recording the second demand-supply matching result; and updating the demand data and the supply data according to the second demand-supply matching result ([0031] As shown in FIG. 1, the demand-supply scheme planning apparatus 20 has, as function blocks, a data storage portion 22 for storing various kinds of data regarding each step, which is construed as recording, a data input portion 24 for inputting a value

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of stock record in each step, sales schemes in sales steps, etc., an index calculating portion 26 for calculating a profitability index, which is construed as updating).

As per claim 29, Kaneko and Ham disclose, wherein the demand data is defined by creating a demand table, the demand table characterizing the relationship between customer demand, the factory facilities, and manufacturing processes for the product as provided thereby ([0039] The operation of the demand-supply scheme planning apparatus 20 will next be described. FIG. 3 is a construction diagram showing an example of a supply chain as a specific example in which a demand-supply scheme is planned by the demand-supply scheme planning apparatus 20).

As per claim 30, Kaneko and Ham disclose, wherein the supply data is defined by creating a supply table, the supply table characterizing the relationship between the factory facilities, the capacity and manufacturing processes provided by the factory facilities ([0039] As shown in FIG. 3, the supply chain includes two sales step 102, 104 as dealers that sell products A, B, C, D, product-producing steps 112, 114 as product-producing factories each of which produces some of the products A, B, C, D, and supplies produced products to the two sales steps 102, 104, parts-producing steps 122, 124 as parts-producing factories each of which produces some of parts a1, b1, c1, d1 for producing the products A, B, C, D and supplies).

As per claim 31, Kaneko and Ham disclose, wherein the rematched demand data is defined by creating a rematched demand table that characterizes the relationship between unsatisfied demand, the factory facilities, and manufacturing processes for the product as provided thereby ([0085] FIG. 14 is a block diagram illustrating a production scheme planning system according to the embodiment. FIG. 14 illustrates only a step concerned and its preceding and succeeding steps for the sake of convenience, where only one pre-step and only one post-step are shown. However, the embodiment can easily be applied to a form in which a plurality of locations are connected, if in each one of the connected steps, a scheme planning process described below is sequentially repeated, or a process of collecting or distributing information exchanged with the pre-step and the post-step is executed).

As per claim 32, Kaneko and Ham disclose, wherein the rematched supply data is defined by creating a plurality of rematched supply tables, the rematched supply tables characterizing the available factory facilities of the manufacturing processes, the manufacturer preferred factory facilities under cost consideration, and the customer preferred factory facilities ([0085] FIG. 14 is a block diagram illustrating a production scheme planning system according to the embodiment. FIG. 14 illustrates only a step concerned and its preceding and succeeding steps for the sake of convenience, where only one pre-step and only one post-step are shown. However, the embodiment can easily be applied to a form in which a plurality of locations are connected, if in each one of the connected steps, a scheme planning process described below is sequentially

repeated, or a process of collecting or distributing information exchanged with the pre-step and the post-step is executed).

Response to Arguments

5. Applicant's arguments filed June 18, 2009 have been fully considered but they are not persuasive.

Applicant argues, "First, Applicant notes that the statement 'abstract (of Ham) discusses classifying demand data into three groups' lacks of support and cannot be obtained from Ham's abstract. According to Ham (abstract), inventory items are segregated into various inventory types based upon how frequently they are ordered in a distribution center. In other words, according to Ham, the subjects that are classified are 'inventory items'. To one of ordinary skill in the art, the 'inventory items' in Ham's teachings are supplies, rather than demands. Consequently, the statement 'abstract (of Ham) discusses classifying demand data into three groups' lacks of support and cannot be obtained from Ham's abstract."

However, as stated, Ham discloses "...inventory items are segregated into various inventory types based upon how frequently they are ordered in a distribution center." Items being arranged based on how frequently they are ordered is a measure of the demand for those items, therefore, the Examiner respectfully disagrees.

Applicant argues, "According to Ham (col. 9, lines 15-25), an 'order allocation' process is disclosed. The order allocation process of Ham 'involves matching an order

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with particular inventory'. Ham does not indicate that this order allocation is a "second matching operation to match the classified demand data with the rematched supply data". Furthermore, based on Ham's teachings, it seems that this order allocation process is performed only for one time, and no second matching operation is performed."

However, the Examiner respectfully disagrees because it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Applicant notes that, "to one of ordinary skill in the art, neither 'leading to predictive supply chain decisions' (Menninger, col. 17, lines 50-53) nor 'a first set of data collected from a plurality of stores of the supply chain utilizing a network (Menninger, col. 17, 58-60) has anything to do with the "capacity model having route information for the product, wherein the route information records a plurality of tools" of claim 25.

However, the cited section of Menninger explicitly teaches capacity management, therefore the Examiner respectfully disagrees.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUSEYE IWARERE whose telephone number is (571)270-5112. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on (571)272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew S Gart/
Supervisory Patent Examiner, Art
Unit 3687

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